

REMARKS

This communication is a full and timely response to the final Office Action dated June 23, 2009. Claims 7-19 remain pending. By this communication, claims 9 and 10 are amended.

Applicants appreciate the Examiner's acknowledgement that claims 9-12 are recite allowable subject matter and that claims 14 and 15 are allowed.

Applicants' claims stand variously rejected under 35 U.S.C. §103. Particularly, in numbered paragraph 3 on page 2 of the Office Action, claims 7, 8, 13, 16, and 18 are alleged to be unpatentable over *Shimizu et al.* U.S. Patent No. 6,201,696 in view of *Nidan et al.* U.S. Patent Pub. No. 2002/0005072. Further, in numbered paragraph 4 on page 8 of the Office Action, claims 17 and 19 are rejected for allegedly being unpatentable over the *Shimizu* and *Nidan* patents and further in view of *Sakamoto et al.* U.S. Patent Pub. No. 2004/0014317. Applicants respectfully traverse these rejections.

Contrary to the Examiner's assertion, Applicants maintain that the combination of *Shimizu* and *Nidan* fails to render Applicants' claims as obvious.

On pages 10 and 11 of the Office Action, the Examiner concedes that *Shimizu* fails to disclose or suggest a first electrically insulating material disposed between an electrically insulating substrate and a first electrically conductive layer and in a corner region formed by the first electrically conductive layer and a peripheral region of the electrically insulating substrate, as recited in claim 7. *Nidan* is relied upon in an effort to remedy this deficiency.

In brief, *Shimizu* discloses a semiconductor power device in which a solidified insulating material is disposed on an outer edge region of a conductive film and the

peripheral region of an insulating substrate where the conductive film is formed on the insulating substrate. In another embodiment, the solidified insulating material is disposed into an interface between the conductive film and the peripheral region of the insulating substrate.

As noted in Applicants' previous response, these configurations are designed to suppress the creeping breakdown and the creeping discharge at an interface of two kinds of insulating materials or at an interface of the substrate and a silicon gel used in the packet structure as the insulating material.

Nidan discloses a pressure sensor having a diaphragm formed on a main surface. A resin member can be disposed on the diaphragm so that pressure to the diaphragm can be transmitted through the resin member. *Nidan* discloses that the resin member can be formed of an epoxy resin, polyimide resin, or silicon material and is injected into a space between the sensor chip so that the space is filled with the resin member. See Nidan, pgph [00700].

Applicants put forward that one of ordinary skill would not have looked to *Nidan* in an effort to remedy the deficiencies of *Shimizu* because the functional characteristics of the resin member as applied in *Nidan* are not transferable to the device described in *Shimizu*.

Particularly, *Shimizu* does not disclose or suggest providing a solidified insulating material between a conductive film and the insulating substrate as recited in Applicants' claims. Rather, *Shimizu* describes a manner of contacting the copper film tightly with the substrate by covering all the edges and corners of the film with the resin, and a way for polishing to smooth the surface of the outer edge of the substrate. See Shimizu, col. 4, lines 41-46. *Nidan*, on the other hand, discloses

disposing a resin member between a sensor chip and stem to transmit pressure to a diaphragm through the resin member. See Nidan, pgph [0071]. "The mere fact that references can be combined or modified does not render the resultant combination obvious unless 'the results would have been predictable to one of ordinary skill in the art.'" *KSR International Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1741, 82 USPQ2d 1385, 1396 (2007), as cited by MPEP §2143.01(III), Eighth Edition, August 2001, Rev. July 2008. Here, because *Nidan* is used in a pressure sensor as a pressure dampening mechanism, one of ordinary skill would not have looked at this improvement or feature as being readily transferable to the package semiconductor device of *Shimizu* as absorbing or detecting pressure is not a function of the latter. In fact, a person of ordinary skill would recognize that the semiconductor device of *Shimizu* could not be improved by the resin material in the same way as described in *Nidan*.

Moreover, "a statement that modifications of the prior art to meet the claimed invention would have been "well within the ordinary skill of the art at the time the claimed invention was made" because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). "[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR*, 127 S.Ct. 1727, 82 USPQ2d at 1396 quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006) as cited by MPEP §2143.01(IV).

Because one of ordinary skill would recognize that *Shimizu* and *Nidan* are not combinable to achieve the claimed results as alleged by the Examiner, Applicant respectfully submits that no objective reason or rational basis has been presented or otherwise exists that supports the Examiner's conclusion.

In summary, *Nidan* and *Shimizu* when applied individually or collectively as alleged by the Examiner fail to disclose or suggest every element recited in Applicants' claims. Moreover, *Sakamoto*, which is applied in combination with the primary references two depending claims 17 and 19, fails to remedy the deficiencies of the latter with respect to the combination of features recited in independent claim 7. For at least these reasons, a *prima facie* case of obvious has not been established. Withdrawal of this rejection, therefore is respectfully requested.

Conclusion

Based on at least the foregoing amendments and remarks, Applicants respectfully submit that claims 7-19 are allowable, and this application is in condition for allowance. In the event any issues remain, the Examiner is invited to contact Applicants' representative identified below.

Respectfully submitted,

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